



## UNITED STATES DEPARTMENT OF COMMERCE

## Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

m-3-2.

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/000,824 12/30/97 AMARASEKERA

J 60SI-1890

IM62/0707

EXAMINER

MICHELLE BUGBEE  
GENERAL ELECTRIC COMPANY  
ONE PLASTICS AVENUE  
PITTSFIELD MA 01201

LU RUTT, C

ART UNIT	PAPER NUMBER
----------	--------------

8

1713

DATE MAILED:

07/07/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/000,824</b>	Applicant(s) <b>Amarasekera et al.</b>
	Examiner <b>Caixia Lu-Rutt</b>	Group Art Unit <b>1713</b>

Responsive to communication(s) filed on May 6, 1999.

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1-16 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-16 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1712

### **DETAILED ACTION**

1. Applicants' amendments and remarks of May 06, 1999 are acknowledged. The objection of record to the disclosure is withdrawn in view of applicants' amendment and the amended claims of the applicants' are accepted. The rejections of claims 1-16 under USC § 103 of record are maintained, and additional claim objection is added.

#### *Claim Objections*

*maintained* 2. Claim 3 is objected to because of the following informalities: a conjunction word such as --or-- is missing in the front of "OH" in line 11. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dams (US 4,355,129) in view of Milbert (US 3,821,140) or Milbert in view of Dams for the reasons recited in Paragraph 3 of Paper No. 5.

#### *Response to Arguments*

4. Applicant's arguments filed May 6, 1999 have been fully considered but they are not persuasive.

Contrary to applicants' argument that the statement, "alumina trihydrate is a well known additive used as an anti-tracking agent, does not appear to be supported by either of the references", the applicants' attentions are directed to Dams: col.3, lines 20-28 and col. 4, line 6. Dams teaches that when "the composition are destined for use as high voltage insulating materials a preferred additive

Art Unit: 1712

is alumina trihydrate employed in a proportion of from about 40 to about 160 part by weight per 100 part by weight of the polydiorganosiloxane (A)" and alumina trihydrate is used in the Example. The reason that Dams does not mention the fact that alumina trihydrate has antitracking characteristics here is because alumina trihydrate as an antitracking agent is well known in the art. The Examiner has provided additional prior art teaching attached to the end of this Office Action.

Contrary the applicants' argument "Dams fails to disclose a silicone polymer containing hydroxy or alkoxy ending groups", Dams does teach a hydroxy-containing methylsiloxanes and phenylsiloxanes (col. 2, lines 43-44).

Contrary the applicants' argument that there is lack of motivation of adding Milbert's siloxane to Dams, Milbert teaches of the siloxane containing a terminal hydroxyl or alkoxy group and alkylene groups, wherein the hydroxyl or alkoxy group can react with the fillers or the modified fillers to enhance the bonding between the siloxane and the filler to provide the composition with enhanced mechanical properties. Thus, it would have been obvious to a skilled artisan at the time the invention was made to employ Milbert's siloxane to Dams' composition to improve the mechanical strength of the composition. The examiner agree that Milbert and Dams's siloxanes are not functionally equivalent, which is very reason for the combining the teaching of the two and to replace Dams's siloxane with the superior siloxane of Milbert.

Contrary to applicants' argument that there is lack of motivation of adding alumina trihydrate antitracking agent to Milbert's composition, Milbert teaches their composition can be used in the sheathing of electrical conductors, the internal linings of aeroplane compartments, the coating of electrical equipment, etc. where the antitracking characteristics is essential, thus, it would have been

Art Unit: 1712

obvious to a skilled artisan to add the alumina trihydrate to Milbert's composition when the composition is use for supra applications.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Adkins (US 4,822,830), Tamplin et al. (US 4,576,993), Kozacka (US 4,183,004), and Keto (3,628,092) are also considered as art of interests.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Caixia Lu-Rutt whose telephone number is (703) 306-3434. Any Fax communication for this application should be sent to (703) 305-5408.

CL

July 2, 1999

*FZ*  
FRED ZITOMER  
PRIMARY EXAMINER  
GROUP 1500  
*1712*

US PAT NO: 4,822,830 [IMAGE AVAILABLE]

L1: 1 of 4

## SUMMARY:

BSUM(5)

Penneck discloses high voltage insulating materials in U.S. Pat. No. 4,001,128 in which the insulating materials contain organic synthetic polymeric materials and an **antitracking** filler system containing at least 20 percent by weight of **alumina trihydrate** and at least one percent by weight based on the weight of the polymer and filler system of a chemically treated silica filler.

US PAT NO: 4,576,993 [IMAGE AVAILABLE]

L1: 2 of 4

## SUMMARY:

BSUM(57)

They are also useful as high voltage insulation incorporating an anti-tracking filler such as **alumina trihydrate** especially to achieve an initial tracking voltage according to ASTM D2303 of greater than 2.5 kV and/or when including as a blend component, in the linear low density ethylene homo- or copolymer, silicone elastomers or ethylene copolymers. Suitable **antitracking** fillers and blendable silicone elastomers and ethylene copolymers are described by R. J. Penneck and R. J. T. Clabburn in "Heat Shrinkable Cable Termination System for High Voltage Cables" Proc. 10th Electrical Insulation Conference, Chicago USA Sept. 20-23 1971, page 292-297 and in UK Pat. Nos. 1,303,432 and 1,137,952 the contents of which are incorporated herein by reference.

US PAT NO: 4,183,004 [IMAGE AVAILABLE]

L1: 3 of 4

## DETDESC:

DETD(4)

FIGS. 3 and 5 show rods 6 of a laminate of glass cloth and a synthetic resin that are provided with inserts of a dried paste comprising an aqueous suspension of melamine resin and **alumina trihydrate**. Such a material is highly gas evolving under the action of electric arcs. The inserts 8 are provided with grooves 8' which receive the fusible element or elements. The distance a between the bottom of grooves 8' and the surface of rods may be varied so as to limit tracking in spite of the limited **antitracking** ability of rods 6.

US PAT NO: 3,628,092 [IMAGE AVAILABLE]

L1: 4 of 4

## DETDESC:

DETD(17)

The removable fused portion 34 includes a fuse 90, which is a fuse of the full-range, nonvented current limiting type. Fuses of the current limiting type are disclosed in U.S. Pat. Nos. 2,496,704, 2,502,992 and 3,134,874, for example, all of which are assigned to the same assignee as the present application. Current limiting fuse 90 includes an insulating fuse tube 92, formed of a suitable material, such as glass melamine, first and second metallic ferrules or electrodes 94 and 96, respectively, which may be pressed over and secured to the fuse tube 92 by a suitable

adhesive, or otherwise fixed to opposite ends of the fuse tube. A fusible element 98 is disposed through the opening in the fuse tube 92, and connected between the first and second electrodes 94 and 100, with the fusible element being supported on an insulating support member 100, if desired. The fusible element 98, which is usually formed of a flat ribbon of silver, has a plurality of spaced notches which extend inwardly from the sides thereof, to periodically reduce the width of the strip and provide a series of arcs during the operation thereof, such that the sum of the plurality of arc voltages provides the current limiting effect desired. Arc extinction without requiring venting of the fuse is obtained by filling the fuse tube 92 with a pulverulent or granular arc quenching material 102, such as silica sand, and the insulating support member 100 may be formed of an arc quenching material, such as a glass polyester including a suitable filler, such as alumina trihydrate, for antitracking characteristics. The first and second electrodes have means connected thereto, such as axially extending threaded stud members 104 and 106, respectively, for connecting contact members thereto. The full-range current limiting fuse provides protection for the feeder system against faults in the inductive apparatus, with the current limiting fuse extinguishing the arc at the designed let-through current, and it also protects the transformer against short circuits and long-time overloads in the connected load circuit. It also protects operating personnel, as the current limiting fuse may be safely connected into a circuit having a low-impedance fault, as the current limiting fuse clears the circuit without exploding or otherwise initiating hazardous operating conditions.